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SAFETY DATA SHEET

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Version 1

1. IDENTIFICATION

Product Name Zamboni Fixative
Product Code 15395
Recommended Use For laboratory, scientific, R&D or manufacturing use.
Company E K Industries, Inc.
1403 Herkimer St.
Joliet, IL 60432
Tel. (800) 283-4244
Emergency Telephone Call CHEMTREC 1-800-424-9300 (EKI CCN 7453)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|---------------------------|------------|
| Skin corrosion/irritation | Category 2 |
| Skin sensitization | Category 1 |

Label elements

Signal word

Warning

Hazard statements

Causes skin irritation. May cause an allergic skin reaction.



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% |
|-----------------------------|------------|----------|
| Water | 7732-18-5 | 94-98 |
| Paraformaldehyde | 30525-89-4 | <3 |
| Sodium Phosphate, dibasic | 7558-79-4 | <2 |
| Sodium Phosphate, monobasic | 7558-80-7 | <0.5 |
| Picric acid | 88-89-1 | <0.5 |
| Sodium hydroxide | 1310-73-2 | <0.1 |

4. FIRST AID MEASURES

Description of first aid measures

| | |
|---------------------|---|
| Eye contact | Flush eyes with plenty of water, removing contact lenses if present. Get medical attention if irritation develops. |
| Skin contact | Wash thoroughly with soap and water while removing contaminated garments. Get medical attention if irritation develops. |
| Inhalation | Remove to fresh air. Get medical attention for any breathing difficulty. |
| Ingestion | Rinse mouth and drink several glasses of water. Contact a physician or poison control center if symptoms develop. |

Most important symptoms and effects, both acute and delayed

| | |
|-----------------|--|
| Symptoms | May cause skin irritation. May cause allergic reactions. |
|-----------------|--|

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Specific hazards arising from the chemical

No information available.

Hazardous combustion products

Formaldehyde. Carbon oxides. Nitrogen oxides (NOx).

Protective equipment and precautions for firefighters

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

| | | | | |
|-------------|-------------------------|-----------------------|----------------------|---|
| NFPA | Health hazards 2 | Flammability 0 | Instability 1 | Physical and Chemical Properties - |
|-------------|-------------------------|-----------------------|----------------------|---|

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| | |
|----------------------------------|---|
| Personal precautions | Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. |
| For emergency responders | Remove all sources of ignition. |
| Environmental precautions | Prevent entry into waterways, sewers, basements or confined areas. |

Methods and material for containment and cleaning up

| | |
|--------------------------------|---|
| Methods for containment | Prevent further leakage or spillage if safe to do so. |
| Methods for cleaning up | Absorb spill with inert material, scoop up and containerize for disposal. |

7. HANDLING AND STORAGE

| | |
|--------------------------------------|--|
| Precautions for safe handling | Use personal protective equipment as required Handle in accordance with good industrial hygiene and safety practice. |
| Storage Conditions | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep material wetted. Do not allow material to dry. |
| Incompatible materials | Strong oxidizing agents. Strong bases. Strong reducing agents. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational exposure limits**

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-------------------------------|------------------------------|--|---|
| Picric acid 88-89-1 | TWA: 0.1 mg/m ³ | TWA: 0.1 mg/m ³ (vacated) TWA: 0.1 mg/m ³ (vacated) Skin Skin | IDLH: 75 mg/m ³ TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³ |
| Sodium hydroxide 1310-73-2 | Ceiling: 2 mg/m ³ | TWA: 2 mg/m ³ (vacated) Ceiling: 2 mg/m ³ | IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³ |

Appropriate engineering controls

| | |
|-----------------------------|---|
| Engineering Controls | Emergency showers, eyewash stations, ventilation systems. |
|-----------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------|---|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin and body protection | Wear protective gloves and protective clothing. |
| Respiratory protection | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |

| | |
|---------------------------------------|--|
| General Hygiene Considerations | Handle in accordance with good industrial hygiene and safety practice. |
|---------------------------------------|--|

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

| | |
|---------------------------------------|----------------------------|
| Physical state | Liquid |
| Appearance | Clear, light yellow |
| Odor | Faint odor of formaldehyde |
| Odor threshold | No information available |
| pH | No information available |
| Melting point / freezing point | No information available |
| Boiling point / boiling range | No information available |
| Flash point | No information available |
| Evaporation rate | No information available |
| Flammability (solid, gas) | No information available |
| Flammability Limit in Air | |
| Upper flammability limit: | No information available |

| | |
|-------------------------------------|--------------------------|
| Lower flammability limit: | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Relative density | No information available |
| Water solubility | Miscible with water |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Kinematic viscosity | No information available |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Stability | Stable under recommended storage conditions. |
| Possibility of Hazardous Reactions | None under normal processing. |
| Conditions to avoid | Extremes of temperature and direct sunlight. |
| Incompatible materials | Strong oxidizing agents. Strong bases. Strong reducing agents. |
| Hazardous Decomposition Products | Carbon oxides. Nitrogen oxides (NOx). Formaldehyde. |

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| | |
|---------------------|---|
| Inhalation | No data available. |
| Eye contact | No data available. |
| Skin contact | Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. |
| Ingestion | No data available. |

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|----------------------|-------------------------|--------------------------------------|
| Paraformaldehyde 30525-89-4 | = 800 mg/kg (Rat) | - | = 1070 mg/m ³ (Rat) 4 h |
| Sodium Phosphate, dibasic 7558-79-4 | = 17 g/kg (Rat) | - | - |
| Sodium Phosphate, monobasic 7558-80-7 | = 8290 mg/kg (Rat) | > 7940 mg/kg (Rabbit) | - |
| Sodium hydroxide 1310-73-2 | - | = 1350 mg/kg (Rabbit) | - |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|----------------------------------|---|
| Skin corrosion/irritation | May cause irritation and dryness. Repeated exposure may cause dermatitis. Harmful if absorbed through skin. |
| Sensitization | May cause sensitization by skin contact. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | This chemical does not contain any carcinogens or potential carcinogens as listed by ACGIH, OSHA, IARC or NTP |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|-------------------------------|----------------------|--|-----------|
| Sodium hydroxide 1310-73-2 | - | 45.4: 96 h Oncorhynchus mykiss mg/L LC50 static | - |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods**Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|------------------------|------|-----------------------------------|------------------------|------------------------|
| Picric acid 88-89-1 | - | Included in waste stream: K060 | - | - |

| Chemical Name | California Hazardous Waste Status |
|-------------------------------|-----------------------------------|
| Picric acid 88-89-1 | Ignitable Reactive |
| Sodium hydroxide 1310-73-2 | Toxic Corrosive |

14. TRANSPORT INFORMATION

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

DOT

Not regulated

IATA

Not regulated

15. REGULATORY INFORMATION

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | SARA 313 - Threshold Values % |
|-----------------------|-------------------------------|
| Picric acid - 88-89-1 | 1.0 |

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute health hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire hazard | No |
| Sudden release of pressure hazard | No |

Reactive Hazard

No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--|-----------------------------|------------------------|---------------------------|----------------------------|
| Paraformaldehyde 30525-89-4 | 1000 lb | - | - | X |
| Sodium Phosphate, dibasic 7558-79-4 | 5000 lb | - | - | X |
| Sodium hydroxide 1310-73-2 | 1000 lb | - | - | X |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|--|--------------------------|----------------|--|
| Paraformaldehyde 30525-89-4 | 1000 lb | - | RQ 1000 lb final RQ RQ 454 kg final RQ |
| Sodium Phosphate, dibasic 7558-79-4 | 5000 lb | - | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Sodium hydroxide 1310-73-2 | 1000 lb | - | RQ 1000 lb final RQ RQ 454 kg final RQ |

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|--|------------|---------------|--------------|
| Paraformaldehyde 30525-89-4 | X | X | X |
| Sodium Phosphate, dibasic 7558-79-4 | X | X | X |
| Picric acid 88-89-1 | X | X | X |
| Sodium hydroxide 1310-73-2 | X | X | X |

16. OTHER INFORMATION**Prepared By**

EKI Regulatory Affairs (Email: reg@eki-chem.com)

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Disclaimer

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End of Safety Data Sheet